

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-5. (Canceled)

6. (Currently amended) A production apparatus of a titanium oxide film comprising:

heating means for heating a silicon substrate,

dispersion heads for discharging independently a gaseous titanium compound for forming a titanium oxide film, a gaseous compound of a dopant element for a silicon semiconductor and an atmospheric gas,

means for introducing the gaseous compound of a dopant element into a first dispersion head,

~~means for introducing the gaseous titanium compound into a first dispersion head, and means for introducing the gaseous compound of a dopant element into second dispersion head,~~

~~means for positioning a bottom discharge end of the first dispersion head for the gaseous titanium compound closer to a surface of the silicon substrate than is a bottom~~

discharge end of the second dispersion head, ~~for the gaseous compound of a dopant element~~

means for conveying the silicon substrate heated to a predetermined temperature in a direction from a position immediately below a discharge port of the first dispersion head to a position immediately below a discharge port of the second dispersion head.

7. (Currently amended) A production apparatus according to claim [[8]] 6, wherein a difference between (i) the distance "A" from the bottom discharge end of the first dispersion head ~~for the gaseous titanium compound to the surface of the silicon substrate~~, and (ii) the distance "B" from the bottom discharge end of the second dispersion head ~~for the gaseous compound of a dopant element to the surface of the silicon substrate~~ is from 0.1 to 30 mm.

8. (Currently amended) A production apparatus according to claim 6, wherein a partition is provided between the dispersion heads and the silicon substrate, the partition being positioned at a circumference of the bottom ends of dispersion ports for the titanium compound and the atmospheric gas, ~~so that the gaseous titanium compound and the atmospheric gas discharged from the respective discharge ports are supplied to the surface of the substrate without dissipation so the concentration of the dopant element in the produced titanium oxide film becomes higher from the surface of the titanium oxide film to the surface of the silicon substrate.~~

9-11. (Canceled)

12. (New) A production apparatus of a film, comprising:

means for heating a substrate,

plural dispersion heads for discharging independently gaseous compounds for forming the film,

means for positioning a bottom discharge end of a former dispersion head closer to a surface of the substrate than is a bottom discharge end of a latter dispersion head,

means for conveying the silicon substrate heated to a predetermined temperature in a direction from a position immediately below a discharge port of the former dispersion head to a position immediately below discharge ports of the latter dispersion heads.

13. (New) The apparatus of claim 6, wherein said means for positioning and means for conveying cause the titanium oxide film to be formed in a non-uniform manner so that a concentration of the dopant element in the film varies through a thickness of the film so that the concentration of the dopant element in the titanium oxide film is higher adjacent a surface of the substrate than at a location spaced further away from the surface of the substrate.

14. (New) The apparatus of claim 12, wherein said means for positioning and means for conveying cause the titanium oxide film to be formed in a non-uniform manner so that a concentration of the dopant element in the film varies through a thickness of the film so that the concentration of the dopant element in the titanium oxide film is higher adjacent a surface of the substrate than at a location spaced further away from the surface of the substrate.